

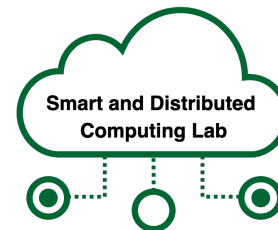
WESTERN SYDNEY
UNIVERSITY



SERVERLESS EDGE COMPUTING FOR MACHINE LEARNING APPLICATIONS

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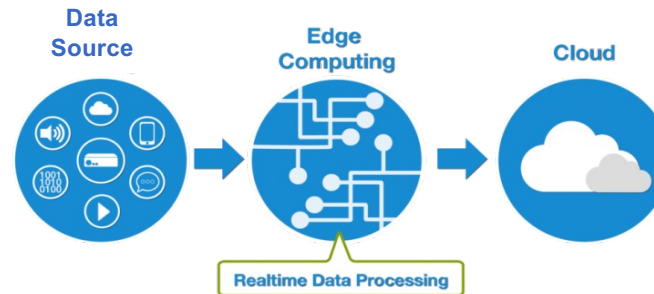




CHALLENGES IN ML APPLICATIONS

○ Sensor Data Processing

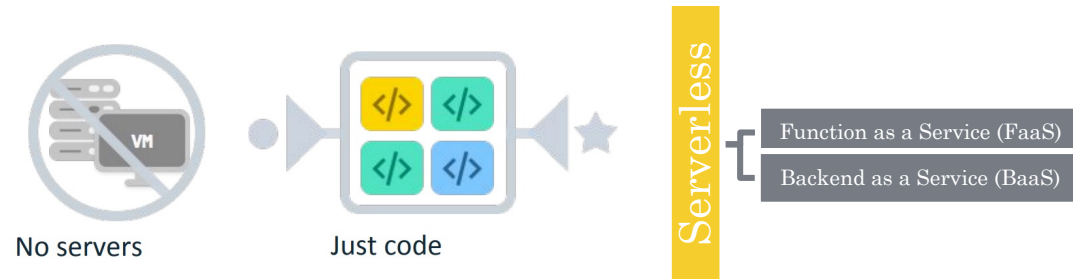
- Latency
- Bandwidth limitation
- Privacy



Edge Computing

○ Application Deployment

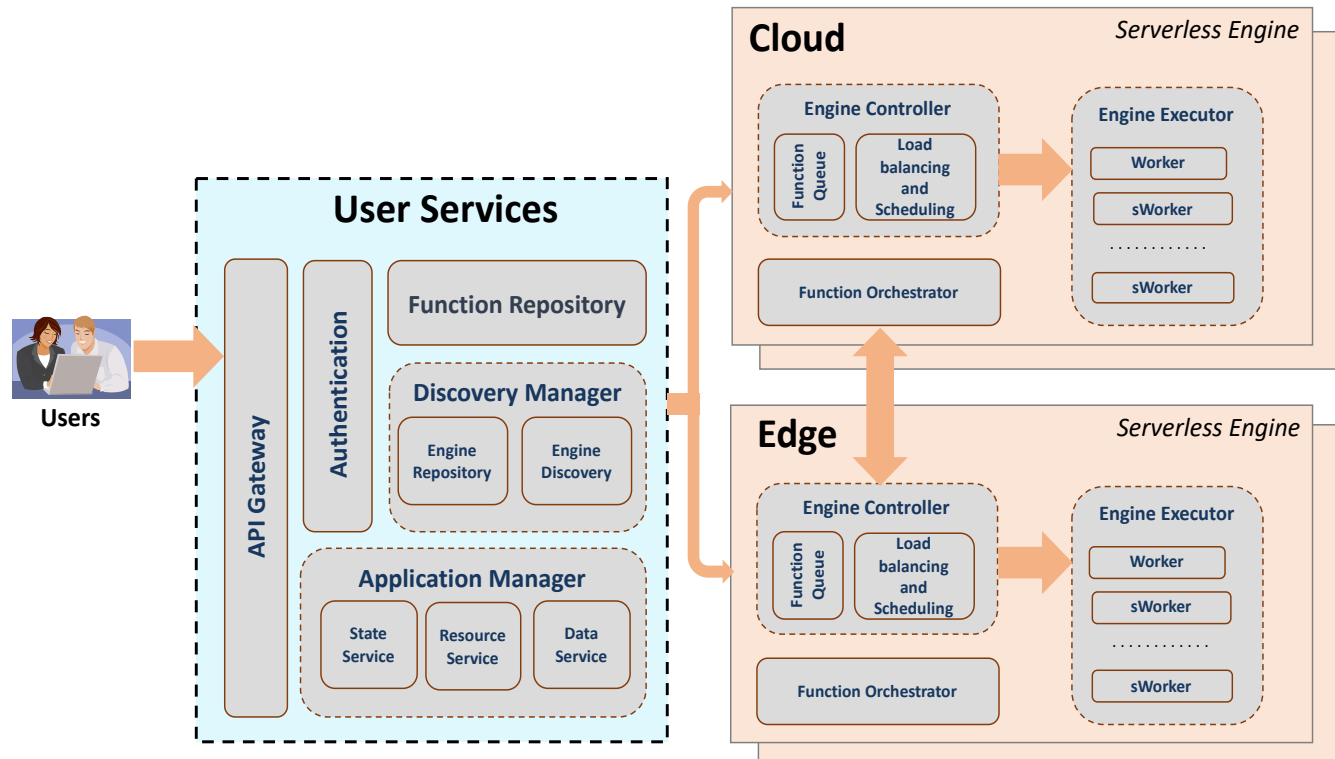
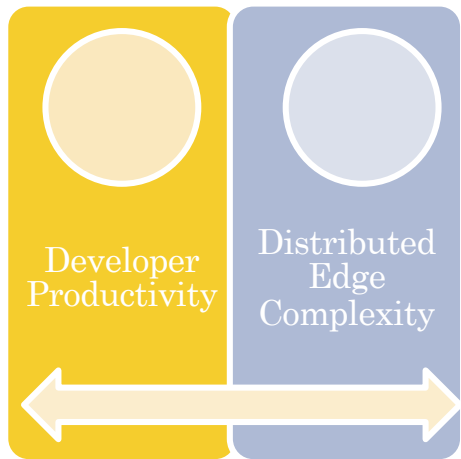
- Complexity
- Scalability
- Resource allocation



Serverless Computing

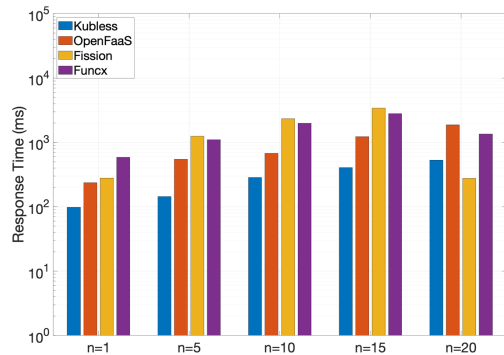


SERVERLESS EDGE COMPUTING

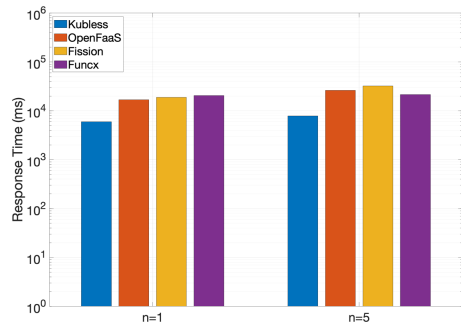




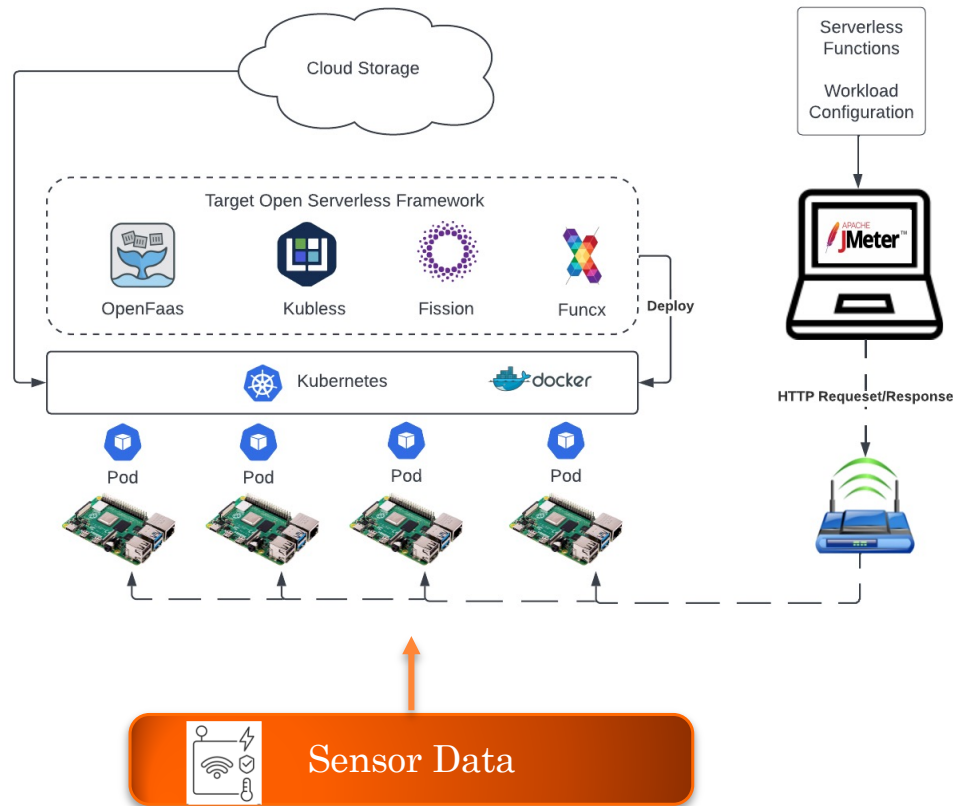
SERVERLESS EDGE COMPUTING TESTBED



Platform Overhead



Inference Time



ML Models (CNN, LSTM)



FEDERATED LEARNING ON COLLABORATIVE EDGE

- Extension of Federated Learning
- Privacy Preserving ML
- Split Training for DNN
- Lower Communication Cost
- Shorter Training Time
- Dynamic Clients Selection

